

Response

The USPTO rejected all remaining claims of the application based on Brown, et. al., U.S. Patent No. 5,587,348 taken with Wood, et. al., U.S. Patent No. 4,748,145. The USPTO also rejected substantially all of the claims of the application based on Johnson, et. al., U.S. Patent No. 4,484,015 taken with Wood, et. al. Further, the USPTO rejected substantially all of the claims under 35 USC § 102(b) asserting that there was a prior use of the invention. The applicants respectfully traverse these rejections.

1. Brown, et. al. taken with Wood, et. al. Brown, et. al. teach an alkyne hydrogenation catalyst composition and a process for its use. The particular catalyst that is disclosed is comprised of palladium, at least one chemically bound alkali metal, preferably potassium, fluorine and an inorganic support material. Preferably silver is also present in the catalyst composition. Thus, Brown, et. al. teach the composition of a catalyst with components significantly different from those claimed in the claims of the application. Of more importance and as admitted by the USPTO, Brown, et. al. fail to teach several important claimed process steps for the manufacture of the catalyst including a) prereduction of the catalyst, b) placement of the prereduced catalyst in a container under a nonoxidizing material, and c) distribution of the prereduced catalyst to the customer while maintaining the reduced catalyst under the nonoxidizing material.

The USPTO asserts that these important process steps of the claims are taught by Wood, et. al. citing Cols. 16 and 17. In fact, the only teaching in Wood, et. al. concerning these process steps is contained in Col. 17, lines 22 - 24, where they state "[i]f the catalyst is reduced before use, it may be stored under an inert atmosphere but should preferably not be kept for prolonged periods in hydrogen." The applicants respectfully assert that the combination of Brown, et. al. with Wood, et. al. fails to disclose the various process steps of the claims.

The USPTO has established a strict three step process for proving *prima facie* obviousness under 35 USC 103, as explained in MPEP 2142-2143. The first step requires the Examiner to set forth the differences in the claims over the applied references and to explain the suggestion or motivation that is present in the reference(s) which would encourage a person skilled in the art to modified the reference(s) to disclose the subject matter of the claims. In In re. Jones, 958 Fed. 2d, 347, 21 USPQ 2d 1941, 1944 (Fed. Cir. 1992), the Court stated that "[t]he prior art must provide one of ordinary skill in the art the motivation to make the proposed... modification needed to arrive at the claimed compound."

The USPTO acknowledges that Brown, et. al. do not recite the process steps of a) prereduction, b) storage under an inert atmosphere and c) shipment with the catalyst under an inert atmosphere. Yet it impliedly asserts that a suggestion or

motivation to teach these steps is present. In fact, such motivation is not present. The teaching in Wood, et. al. is that prereduction and placement under an inert atmosphere is not preferred. In the numerous preparations disclosed in the examples in Wood, et. al. from Cols. 17 - 25, none utilizes prereduction and placement of a catalyst under an inert atmosphere. Note particularly Examples 10 and 11, in Cols. 23 and 24, which disclose selective hydrogenation catalysts. These examples specifically failed to disclose prereduction or placement of a catalyst under an inert atmosphere.

Further, there is no teaching or suggestion in Brown, et. al. of such prereduction or placement under an inert atmosphere process steps. In fact Brown, et. al. disclose process steps contrary to the claimed ex situ reduction process steps when it teaches in situ reduction of the catalyst. For example, in Example II at Col. 6, lines 2 - 8, an unreduced catalyst is placed in the reactor tube and only then is it reduced. Thus, a person skilled in the art reviewing the teaching of Brown, et. al. when combined with Wood, et. al. would be taught to reduce the catalyst in situ and not prereduce the catalyst and place the catalyst under a nonoxidizing atmosphere.

In previous Office Actions, the USPTO acknowledged that Wood, et. al. failed to teach the prevention of reoxidation of the catalyst. In fact, in the May 11, 2004 Office Action, the USPTO

stated that "Wood makes the same catalyst even though possibly stored differently." (Page 3 of that Office Action.) If the catalysts of both Wood, et. al. and Brown, et. al. are stored differently, their respective processes of manufacture must be different from the claimed process of the application.

Recognizing that these deficiencies exist in the cited references, the second step necessary for the proof of *prima facie* obviousness requires the Examiner to prove that the proposed modification of the reference(s) would be likely to arrive at the claimed subject matter. In this situation, such combination would not have occurred as the prereduction of the catalyst step is not taught and the cited references, in fact, teach away from this prereduction process step. Accordingly, it cannot be obvious to make the proposed changes in the process taught by Brown, et. al. and Wood, et. al., as those changes would be more expensive and more difficult than not to prereduce and store the catalysts.

The third step of the *prima facie* test requires the Examiner to explain why the proposed modification would be obvious in teaching each claim limitation. The USPTO has also failed to satisfy this test as the particular process steps are neither taught nor suggested by the combination of Brown, et. al. taken with Wood, et. al.

Even assuming that some suggestion in Wood, et. al. would encourage someone to utilize the process that is claimed by the

applicants, the USPTO is required to identify where in Wood, et. al. there is a motivating suggestion to utilize each of the missing claim elements. As none of these claims elements are specifically disclosed or suggested in Wood, et. al., the USPTO has failed in its proof.

The USPTO has also failed to disclose any suggestion or motivation in Wood, et. al. to teach any, and certainly not all, of the above-referenced process steps.

Moreover, the USPTO has failed to prove that the modifications in the process that are allegedly taught in Wood, et. al. that are necessary to produce the catalyst that is claimed are "desirable." The desirability of the motivation must also be proved to established *prima facie* obviousness, as stated in In re Fritch, 922 Fed. 2d 1260, 23 USPQ 1780, 1783-84 (Fed. Cir. 1992).

In addition, the USPTO has failed to show that the motivating suggestions to make the various changes to the process are "explicit" and not merely what are referred to as being "obvious expedience." The USPTO has acknowledged that the differences between the process taught by the combination of Wood, et. al. and Brown, et. al. are not specifically disclosed. Thus, it is clear that they can not be "explicitly" disclosed. Thus, the USPTO has failed to satisfy the requirements of proof of obviousness, even under the guidelines set forth in its own MPEP.

2. Combination of Johnson, et. al. taken with Wood, et. al.

The USPTO further asserts that the claims of the application are taught by the combination of Johnson, et. al. with Wood, et. al. Johnson, et. al., as do Brown, et. al., disclose selective hydrogenation catalysts with a composition similar to but not the same as that disclosed in the claims of the application. Notwithstanding, Johnson, et. al. fail to disclose certain critical process steps claimed in the claims of the application. This failure is impliedly acknowledged by the USPTO.

As with the combination of Brown, et. al. and Wood, et. al., the combination of Johnson, et. al. and Wood, et. al. fails to teach certain critical process steps of the claims, namely the prereduction step, the placement of the reduced catalyst in a container under a nonoxidizing material step, and the distribution of the prereduced catalyst in the container under the nonoxidizing material step. In addition, even more apparently than occurs from the combination of Brown, et. al. and Wood, et. al., the combination of Johnson, et. al. and Wood, et. al. fail to teach that the claimed process steps are obvious.

The first step to prove *prima facie* obviousness requires the Examiner to set forth the differences in the claims over the applied references and to explain the suggestion or motivation that is present in the references which would encourage a person skilled in the art to combine those references to teach each of the process steps claimed in the application.

Johnson, et. al. clearly does not teach and, in fact, teaches away from at least three process steps namely prereduction, placement of the reduced catalyst in a container under a nonoxidizing material, and distribution of the prereduced catalyst in the container. At Col. 3, lines 49 - 56, Johnson, et. al. state that the reduction step can be accomplished *in situ* using the selective hydrogenation feed stream or a gas, such as hydrogen, prior to introduction of the selective hydrogenation feed stream. Under either circumstance the catalyst is reduced *in situ*. A person skilled in the art reviewing the teaching of Johnson, et. al. would be taught that the catalyst should be placed in the reactor in its unreduced state. Thus, Johnson, et. al. teach that prereduction and storage under a nonoxidizing atmosphere are not necessary or required steps. The Johnson, et. al. process for reduction of the catalyst is exactly the opposite of what is claimed by the applicants. Thus, Johnson, et. al. teach away from what is implied by the USPTO as having been taught by Wood, et. al. Accordingly, not only is there no motivation or suggestion to combine these references to teach the missing steps claimed in the claims of the application, the motivation and suggestion in Johnson, et. al. is to utilize process steps which are the opposite of what is claimed by the applicants. Thus, the USPTO has failed to satisfy the very first step for proof of *prima facie* obviousness.

The second step requires the USPTO to prove that the proposed

modification that is claimed in the claims of the application would be likely to arrive at the claimed subject matter. This is also not taught by Johnson, et. al., as Johnson, et. al. teach a different process for reduction of the catalyst than is taught by the claims of the application.

Not surprisingly, as the first two steps of the proof of *prima facie* obviousness are not satisfied by this combination, the third step, whereby the USPTO explains why the proposed modification would be obvious and how each claim limitation is taught, is also not taught. For all of these reasons, it is clear that the combination of Johnson, et. al. with Wood, et. al. does not teach the invention of the application.

3. Public use or Sale.

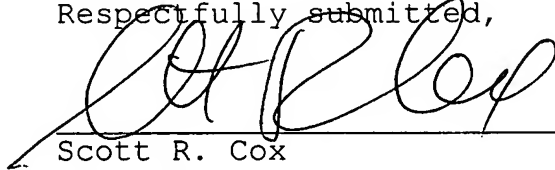
The final argument by the USPTO is that Brown, et. al. indicates that a public use of the invention occurred. The Office Action states that "it appears that the claimed catalyst was shipped in the claimed manner by the present corporation or its subsidiary, or that the company was purchased or taken over." It is true that Brown, et. al. disclose the use of the catalyst G-83C, which is one of the catalyst that is discussed in the application. However, the applicants are not claiming the composition of this catalyst. Rather they are claiming a process for the manufacture of a catalyst, wherein after the catalyst composition is produced, it is prereduced *ex situ*, placed in a container under a

nonoxidizing material, and then distributed to the customer while maintaining the prereduced catalyst under the nonoxidizing material. None of those process steps are disclosed in Brown, et. al. For the invention to have been publicly in use or on sale requires that the invention, as claimed, be publicly in use or on sale. The "invention" is what is claimed in the claims. The claims of the application claim "a process for the manufacture of a catalyst" and not the catalyst itself. This process is not disclosed in Brown, et. al. and was not in public use or sale more than one year prior to the application date of the invention. Nothing in Brown, et. al. indicates that the process was publicly known or in use more than a year prior to the application date. Further, applicants respectfully assert that the process of the claims was not in public use more than one year prior to the date of the application. Finally, the applicants assert that the G83C catalyst was sold in a non-reduced state (See Comparative Example 4) prior to the application date. Thus, the applicants never produced and sold or offered for sale catalysts produced by the process of the application more than one year prior to the application date.

CONCLUSION

The applicants believe that the process is not taught nor is it obvious from the references cited. Further, the applicants respectfully assert that the process was not publicly known, and accordingly requests that the claims of the application be allowed.

Respectfully submitted,



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